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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,199	10/06/2006	Toshiaki Kakutani	MIPEP178	4060
25920 7590 07/08/2011 MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085				
EXAMINER				
WILLS, LAWRENCE E				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/551,199

**Applicant(s)**

KAKUTANI, TOSHIAKI

**Examiner**

LAWRENCE WILLS

**Art Unit**

2625

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 April 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-6,8,20-22,24-26,28,30,31 and 33 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.

- 6) ☒ Claim(s) 1,2,4-6,8,20-22,24-26,28,30,31 and 33 is/are rejected.

- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.

- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments with respect to claims 1, 2, 4-6, 8, 20-22, 24-26, 28, 30, 31, and 33 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 4-6, 8, 20-22, 24-26, 28, 30, 31, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Toshiaki (US Patent No. 6,338,538).

Claim 1 (Currently Amended): An image output control system comprising an image processing device that makes image data subjected to a preset series of image processing and an image output device that creates dots according to a result of the preset series of image processing to output an image, said image processing device (driver 96 Fig. 8) comprising: **a pixel group generation module** (rasterizer 97/color correction module 98 Fig. 8) that sequentially extracts, from the image, a plurality of pixel groups, (converting the image information processed by application program to dot-based color information

and color correction of converted image information according to the characteristics of an image output apparatus, 13:55-65 the BRI of pixel groups is the group of cyan pixels, magenta pixels, yellow pixels, and black pixels which constitute a color-corrected tone data DS) each of the pixel groups comprising a predetermined number of pixels selected from among pixels constituting the image (shown by the Fig. 13 pixels with values of 63-255 are the selected); **a dot number specification module (halftone module 99)** that specifies a number of dots to be created (shown in Fig. 16 by on/off state of deep dots) in each of the pixel groups (halftone processing performed for all of CMYK 15:5-15), said number of dots being specified based on a result of comparison between a tone value of each of the pixels constituting each of the pixel groups and a corresponding threshold value mapped in each of dither matrices, which is provided to each of the pixel groups, wherein each of the dither matrices comprises a plurality of threshold values selected from among various types of threshold values mapped in a two- dimensional array (as shown in Fig. 16 and described in the systematic dither method using a threshold matrix 16:18-46), wherein the number of the selected threshold values is equal to the number of pixels included in each of the pixel groups (notice the number of threshold values in threshold matrix corresponds to the number of pixels in the deep level data Fig. 16 deep level data as described in 16:3-18 and Fig. 13) and the number of types of the threshold values (each of the threshold values 0 to 255 16:34 is considered the BRI for number of types

of the threshold values) mapped in the two-dimensional array is greater than the number of the pixels included in each of the pixel groups (threshold values range from 0-255 16:34 and selected number of pixels range from 63-255 shown by Fig. 13) and

**a number data supply module** (driver 90 interface to printer 20 Fig. 8) that supplies dot number data representing the number of dots specified with regard to each pixel group to said image output device (computer 90 sending signals to printer 20 13:50), said **image output device** comprising: **a number data receiving module** (connector 56 Fig. 2) that receives the dot number data with regard to each pixel group (printer 20 receive signals from computer 90 13:50); **a priority order selection module** that selects a priority order of pixels for dot formation in each pixel group (order of application of the pixel groups CMYK shown in Fig. 4 by first pair, second pair, third pair 13:24-37); **a pixel position determination module** that determines position of each dot-on pixel included in each pixel group, based on the received dot number data and the selected priority order (carriage 30 controls the discharge of ink and production of dot patterns); and **a dot formation module** (print head 28 mounted on carriage 30 12:35-40) that actually creates a dot at the determined position of each dot-on pixel (ink particles sprayed from ends of nozzles onto a sheet of paper 13:15-30).

Claim 2 and 6 (Original): An image output control system in accordance with claim 1, wherein said priority order selection module selects one priority order for each pixel group, among multiple priority orders prepared in advance (Fig. 4).

Claim 3 (Canceled).

Claim 4, 21, and 25 (Previously Presented): An image output control system in accordance with claim 1, wherein said priority order selection module divides the dither matrix referred to for the dot number specification into multiple groups (notice the binary coding for each of the groups Fig. 22 is based on the order described in Fig. 4) corresponding to multiple pixel groups, specifies a priority order of pixels in each pixel group based on a result of comparison between the image data of respective pixels included in the pixel group and corresponding threshold values (Fig. 22), and stores the specified priority orders of the multiple pixel groups as the multiple priority orders, said priority order selection module selecting one priority order corresponding to a position of each pixel group in the image, among the multiple priority orders based on the dither matrix (Fig. 22).

Regarding claim 8 number data receiving module receives the dot number data in each pixel group of plural pixels that are adjacent to one another and have a preset positional relation (Fig. 16).

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kakutani (US Publication No. 2005/0219563)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE WILLS whose telephone number is (571)270-3145. The examiner can normally be reached on Monday-Friday 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan Park can be reached on 571-272-7409. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEW  
July 2, 2011

/Mark K Zimmerman/  
Supervisory Patent Examiner, Art Unit 2625